

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code: PDPGN083Z0
Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Eriogonum mortonianum*
COMMON NAME: Morton Wild Buckwheat
SYNONYMS:
FAMILY: Polygonaceae

AUTHOR, PLACE OF PUBLICATION: Reveal, J.L. 1974. Brittonia 26 (1)90-94.

TYPE LOCALITY: Arizona: Mohave Co.: along Arizona Hwy 389, 4.5 mi SW of U.S. Hwy 89A at Fredonia (Coconino Co.) and ca. 9 mi ENE of Pipe Springs, on red clay hills.

TYPE SPECIMEN: MNA (sn). J.L. Reveal 2904. 16 August 1972. Holotype. Many Isotypes including NY 323400.

TAXONOMIC UNIQUENESS: A distinct species in a genus of about 225 species mainly in western North America.

DESCRIPTION: Erect shrub up to 80.0 cm (32.0 in.) tall and 50.0-100.0 cm (20.0-40.0 in.) across. Leaves elliptic, 1.5-4.0 cm (0.6-1.6 in.) long and 0.6-1.0 cm (0.24-0.4 in.) wide; leaf margins thickened but do not turn under. Stems and branches yellowish-green; **stems and leaves glabrous** (hairless). Inflorescence stalk is branched, 15.0-25.0 cm (6.0-10.0 in.) long. Flowers vary in color from pale yellow to white, 2.5-3.0 mm (0.1-0.12 in.) long. Odor-free.

AIDS TO IDENTIFICATION: Three species of shrubby *Eriogonum* occur together in the same habitat. The leaves of *E.t. atwoodii* are tomentose (matted hair) underneath, *E. mortonianum* has glabrous (unhaired) leaves underneath, and *E. corymbosum* is densely white tomentose on both leaf surfaces. After the leaves fall, *E. mortonianum* is almost impossible to distinguish from *E. thompsonae atwoodii*.

Eriogonum mortonianum, is clearly related to *E. smithii*, however, it differs from *E. smithii* in that it is much larger, more highly branched inflorescence, smaller flowers and involucre, non-revolute leaves, and yellowish green stems and branches (Reveal 1974). The basic habitat of the two species is different, largely due to differences in habitat. *E. mortonianum* is found on reddish clay hills where the entire plant is exposed, while on the other hand, *E. smithii* is found in deep, moving "blow sand," which may cover much of the plant encouraging a much more diffuse growth habit than in *E. mortonianum* (Reveal 1974).

ILLUSTRATIONS: Line drawing (Reveal 1974:91)
Line drawing (USFWS)
Color photos of plant, flowers, habitat (<http://www.life.umd.edu/flower/1537b.jpeg>)

TOTAL RANGE: Northwest Arizona; red clay hills 4 to 6 miles southwest of Fredonia along Highway 389, Mohave County, Arizona.

RANGE WITHIN ARIZONA: See "Total Range."

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Woody Perennial

PHENOLOGY: Flowers and sets seed July - September.

BIOLOGY: Reveal and Spellenberg 1976: chromosomes, n=20. Readily hybridizes with *E. thompsonae* var. *atwoodii* though these species are not closely related.

HABITAT: Usually along small drainages in red clay hills of very shallow gypseous soils on sandstone and shale uplands.

ELEVATION: 4,650 feet (1418 m).

EXPOSURE: All

SUBSTRATE: Red gypseous sandy-clay derived from Moenkopi Formation outcrops.

PLANT COMMUNITY: Great Basin Desertscrub with saltbush, sagebrush, and Mormon tea.

POPULATION TRENDS: Only one population is known, having approximately 750 plants. Appears to be stable with several size/age classes represented (Phillips et al. 1980).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[Category 2 USDI, FWS 1983]
[Category 1 USDI, FWS 1980]
[PE USDI, FWS 1976]
[PTN-E USDI, FWS 1975]

STATE STATUS: Salvage Restricted (ARS 1993)

OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1990, 1999)

MANAGEMENT FACTORS: Right-of-way maintenance of Highway AZ 389; livestock use and associated developments. Highly restricted distribution (only one known population).

CONSERVATION MEASURES TAKEN:

SUGGESTED PROJECTS: Monitor population. Establish an agreement with the Arizona Department of Transportation concerning road maintenance at this site. Studies concerning hybridization and the taxonomic validity of this taxon. Studies on habitat requirements. Additional surveys needed, especially on the Kaibab-Paiute Reservation.

LAND MANAGEMENT/OWNERSHIP: BIA - Kaibab-Paiute Reservation; Arizona State Land Department (highway right-of-way).

SOURCES OF FURTHER INFORMATION**LITERATURE CITATIONS:**

Arizona Revised Statutes, Chapter 7. 1993. Arizona Native Plant Law. Appendix A:11.

Phillips, A.M. III. 1979. Field searches and studies on certain proposed, threatened and endangered plant species, Arizona Strip District. Submitted to Arizona State Office, Bureau of Land Management, Phoenix, Arizona.

- Phillips, A.M. III. L.T. Green III and J. Mazzoni. 1980. Status report *Eriogonum mortonianum* Reveal. Submitted to U.S. Fish and Wildlife Service, Albuquerque, New Mexico. 9 pp.
- Phillips, A. 1999. *Eriogonum mortonianum* Reveal (Morton Wild Buckwheat), Polygonaceae. Draft abstract from Arizona Rare Plant Book, in prep.
- Reveal, J.L. 1974. Two shrubby novelties in *Eriogonum* (Polygonaceae) from the deserts of Utah and Arizona. *Brittonia* 26: 90-94.
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- USDA, Forest Service Region 3. 1990. Regional Forester's Sensitive Species List.
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- USDI, Fish and Wildlife Service. 1975. Threatened or Endangered Fauna or Flora. Federal Register 40(127):27828.
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ADDITIONAL INFORMATION:

Phillips (1980) recommended listing as Endangered under the Endangered Species Act.

May/June 1992 many plants within the right-of-way of Highway AZ 389 were destroyed during road maintenance activities.

Revised:	1991-12-09 (JSP)
	1992-05-21 (BGP)
	1992-09-14 (BKP)
	2001-12-20 (SMS)

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